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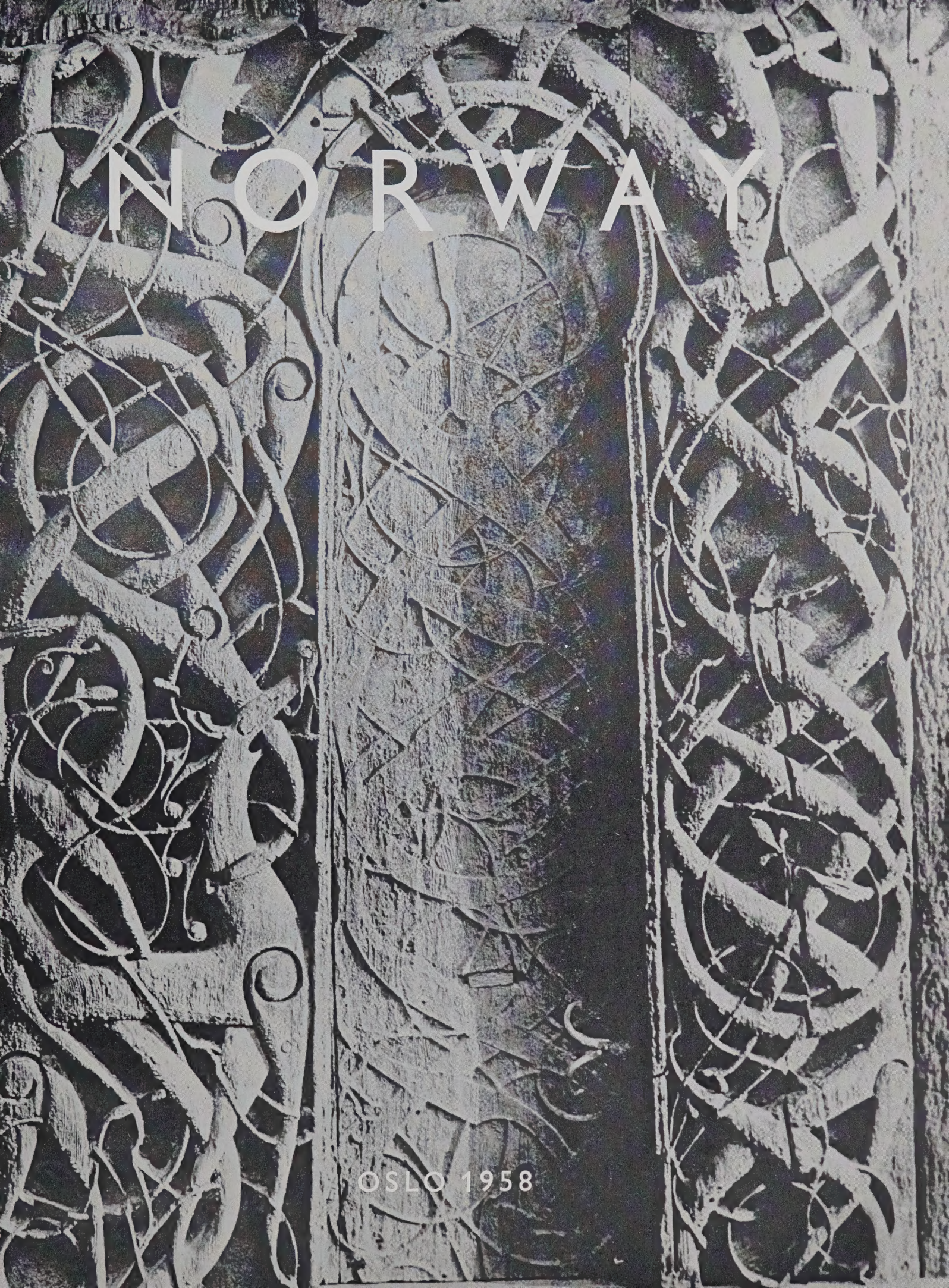
NORWAY



OSLO 1958

Preceding page: a treasured relic of ancient culture is the elaborately carved entrance to Urnes stave church dating from the dawn of Christianity in Norway.

H. M. King Olav.

This short description of the land of the Norwegians and brief account of their cultural and economic life will, I hope, give, although necessarily brief, a clear picture of Norway today. I trust that this presentation will contribute towards a better understanding and knowledge of our democratic country and may convey a fuller understanding of the way of life of our people, our ideals and our free institutions and our determination to undertake our share of the responsibilities for making this a better world to live in.

Olav R

NORWAY

Norway is not a large country — the space it occupies on the face of the earth is quite modest — but it is a country of considerable contrasts. It is a mountainous country, but the visitor to the lowlands around the Oslo fjord might not think so. It is a northern country, but the waters around the south coast are warm to bathe in. It is a maritime country, but in the dry forests of the east the sea is not even a tang in the air. And though Norway has only a small population — indeed it is the most sparsely peopled country in Europe after Iceland — the society that has developed there is of considerable complexity. This has not been a particularly easy or rich country to live and work in, and it has demanded a good deal of effort and organisation to establish the quite high standard of life and livelihood that is enjoyed today.

Norway has been a nation united for not much more than a thousand years. It has been populated for probably not more than ten thousand years. But its mountains and fjords and islands are the work of many millions of years. During long glacial ages the ice has ploughed deep furrows from the heights down to the sea, while the sea in turn has beat untiringly and weathered the rocky shore. Norway was nature's battlefield, but from it has emerged a country with much scenic beauty, a nature's playground which attracts a million visitors a year from other lands.

Farthest north in Europe, Norway lies between the same lines of latitude as parts of Greenland, Alaska, Siberia, and a third of its length lies beyond the Arctic Circle. But Norway is warmer than other lands so far north. True, the winter nights are long, and over much of Norway there is snow for months on end and frost enters the ground and the lakes and rivers in the interior freeze. But extreme winter weather is experienced mostly in the inland and eastern districts, while in the south and west even the winter is temperate and mild, and rarely does ice settle around the coast to block a channel or port even north of the Arctic Circle.

It is the sea that warms the land. Norway is not an island, but the sea envelops it, the Arctic Ocean in the north, the Atlantic in the west, and the North Sea in the south, while the fjords carry the water deep into the land. The sea stores summer warmth, releases it in winter, and from the American tropics the Atlantic Ocean brings the Gulf Stream which sweeps up the whole length of the Norwegian coast and raises the temperature considerably over the average for the latitude.

The Gulf Stream is perhaps the principal bounty that the sea brings Norway, but sea and land are fruitfully married there in other ways besides. In a straight line Norway is a thousand miles long, but the deeply indented and marvellously complex coast with its winding fjords and fringed by more than a hundred thousand islands and holms is much longer than that. Here is a fusion of sea and land, and it is here where the elements meet that most Norwegians live. There is a saying that the sea unites, and divides not, and certainly since man first settled on this edge of the Scandinavian peninsula the sea has been a highway even more than the land, linking the scattered communities and towns along the coast, where the great majority of the population live.

The sea is larder as well as highway for Norwegians. Its silver harvest was ever a necessary supplement to the rather meagre yield of the soil. It is estimated that at

Opposite: Borgund stave church — one of a score of wooden churches surviving from the early middle ages.

most five per cent of the surface of Norway can be cultivated. Most of the rest is mountain, and it is the high and rocky terrain of the greater part of the country that constitutes, next to its northern and maritime nature, the most characteristic of Norway's geographical features. Today the mountains are the source of hydro-electric power, the key to industrial progress, but this is a twentieth century development. Earlier they were more a barrier than a spur to economic expansion.

Because so much of Norway is mountain, it has grown only slowly, and even now the population is only three and a half million in an area of 125,000 square miles. Here is space, here is solitude for those who want it, but here too are problems of transportation and of many other aspects of national management. There is a concentration of population in the capital, Oslo, with its 450,000 inhabitants, in Bergen, Trondheim, and a number of other towns, but two thirds of the people are scattered in rural areas, divided by considerable distances, separated by mountains and other natural obstacles. In the far north, the Lapps — a racial minority with their own language — live, and a number still pursue their ancient nomadic existence, wandering with their reindeer herds across the bleak wastes of Finnmark. Still farther north, in the remote Spitsbergen archipelago, under Norwegian sovereignty since 1925, miners work Norway's only coal deposits. The world's most northerly community, Spitsbergen is ice-blocked through a long winter of unbroken night. Here in deepest arctic, as on the whaling grounds of far antarctic, Norwegians work a hard stint.

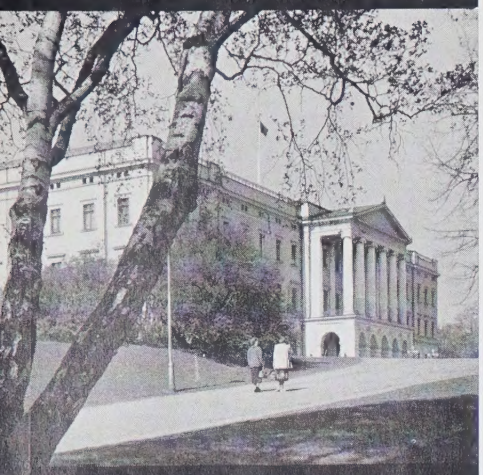
Prized highest among the relics of Norway's Viking past are the graceful longships now preserved in Oslo. A thousand years ago they cleaved the seas even to the far North American shores.

Lack of economic opportunity was the spur to mass migration in the nineteenth century. In the course of a hundred years a million Norwegians settled abroad. Mostly they sailed across the Atlantic to the wide prairies, the bustling cities of the New World. Norway's own restricted resources could not support them. Necessity was also one of the spurs that drove the Vikings a thousand years ago to sail and settle overseas.

The history of Norway goes back beyond written records, beyond rock inscriptions, to the last glacial age, the last ice receding. Then men first took abode there, the hunters and fishers, wandering there from points west and south, moved by unaccountable instinct to this edge of the earth next the sea. The geographical configuration of the country made them stay separate tribes, independent petty kingdoms, right up till about the year 900 A. D. when Harald the Fairhaired bludgeoned the most of Norway into an uneasy whole. It was also this constriction at home that drove many Norwegians overseas, not only to conquer but to colonise. From 800 to 1000 were the years when Viking excursions and expansion were at their peak. Iceland was peopled by Norwegians then, later Greenland too, and from there Leif Erikson, that doughty Viking seaman and freeman plunged west to the shores of North America which he found fair and named Vineland. In France a Norse kingdom — Normandy — was established which was to influence significantly the political course both there and in England.

Even the Viking raiders who looted and slew in Britain and France and down round the Mediterranean shores had certain codes of behaviour, of courage and constancy, which perhaps made them more than mere pirates, and their rough culture was enriched by brushing with civilisations overseas. Norway has still many a memento of the Viking age, stave churches, longships, wood carving, metal work, the ancient saga tales. And from their expeditions abroad the Vikings brought back, above all, the Christian gospel for which a great battle was fought at Stiklestad in 1030. Olav Haraldsson, the Christian king, fell there, but from that year Norway was counted a Christian kingdom, and Olav himself was canonised the country's patron saint.

There is a cycle in the affairs of nations. After a period of expansion abroad and consolidation at home, a decline set in, first an economic decline, then a political one. Much of the country's trade came under the control of the Hanseatic League, and in the fourteenth century Norway lapsed into a dynastic union, first with Sweden and



Above: The Royal Palace in Oslo.

Below: H. M. King Haakon, revered monarch of Norway from 1905 to 1957, was the special target of German warplanes during the 1940 campaign. Here he shelters in the lee of a birch tree as machine-gun bullets spatter around.

Opposite: The Cathedral in Trondheim, one of the finest examples in Scandinavia of Gothic architecture. It is now under restoration.

Denmark, then with Denmark alone, a union which endured for four hundred years. After an abortive rising in the sixteenth century, Norway was degraded to vassal status. Yet native culture and tradition flow deep and cannot be effaced entirely by a long span of alien imposition. Above all, the notion of man more than a creature, of man a spirit with certain rights and responsibilities, of man possessed of a proprietorial share in the land and with a voice in the councils of his community, survived still. An old Norse edict proclaimed «By law shall the nation be built, not by lawlessness laid asunder,» and this was a guide that still held over the centuries.

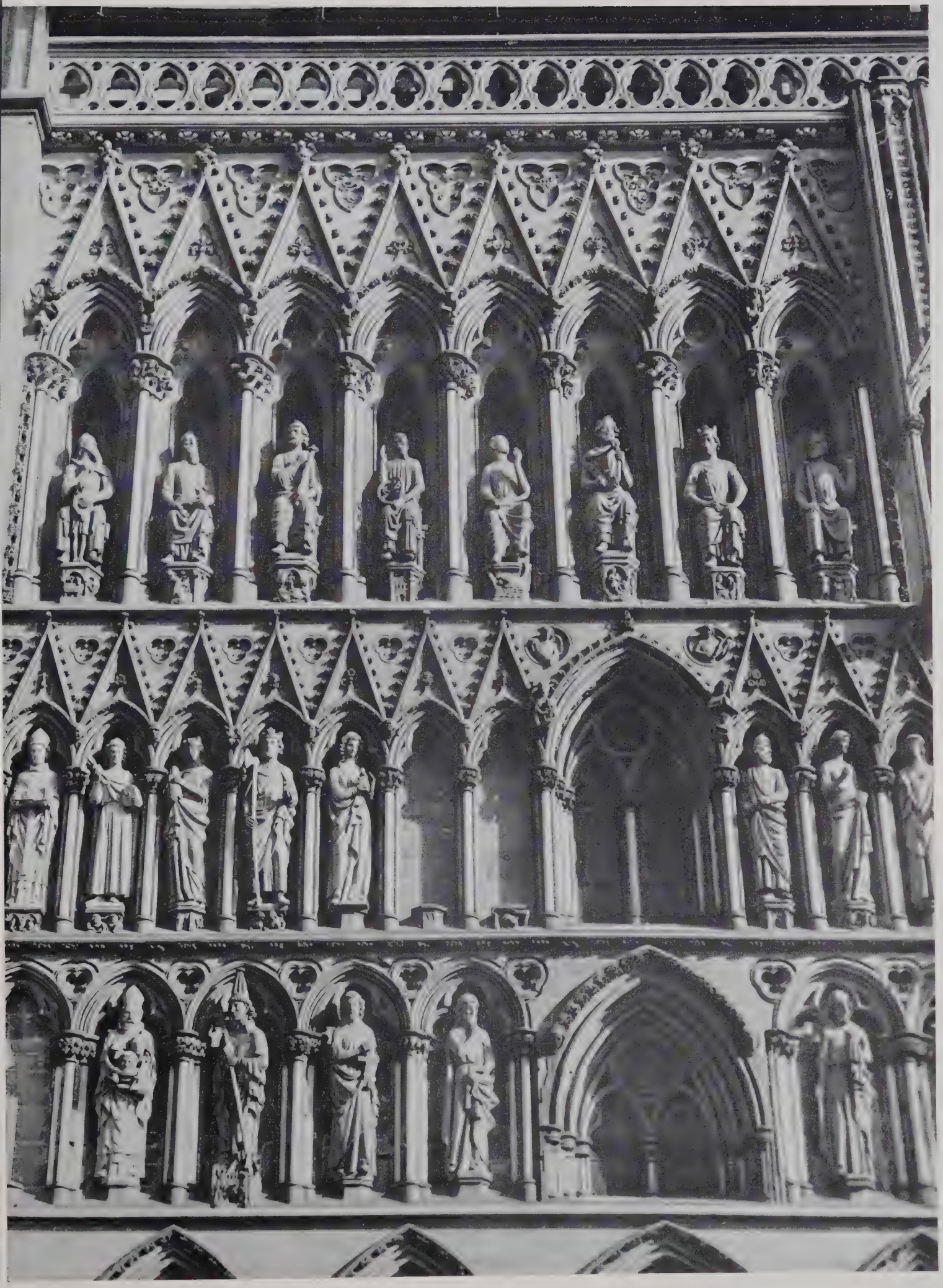
Slowly the tide of national consciousness mounted again, and the ties of union slackened. Norway's growing timber trade, its expanding merchant fleet, brought increasing prosperity, and when Denmark sided with France in the Napoleonic Wars Norway was only an unwilling partner and its interests were badly hit by the British blockade. When by the Kiel settlement of 1814 Norway was handed as a kind of booty from Denmark to Sweden, there was an upsurge of protest. Norwegian patriots met at Eidsvoll and drafted a constitution of national independence and parliamentary democracy, inspired largely by the doctrines of the American and French revolutions. It is that constitution which, with some amendments, is still in force today and which is celebrated on Constitution Day every seventeenth of May.

With Sweden a settlement was negotiated which linked the two countries under the same — Swedish — crown, but Norway kept its own free constitution, its own parliament, its own administration, and under this recovery of almost complete national independence there was a remarkable flowering of the fortunes of the country, in literature and music and other provinces of art and culture, and also, as the nineteenth century advanced, in economic life too. Inevitably, as this progress went on, the ties with Sweden irked more and more, and finally, in 1905, by an agreement which does credit as much to Sweden as to Norway, the union was dissolved, peacefully, without the shed of a drop of blood. The issue which directly precipitated the break was the Norwegian demand for a consular service of its own, especially to handle abroad the interests of the merchant fleet, now among the largest in the world. But behind was a record of constitutional difficulties which could only be resolved by a return of untrammelled national sovereignty.

So close, however, were Scandinavian affiliations that it was a Danish prince who was invited to ascend the throne of the new, completely independent Norway. King Haakon VII, who died as lately as 1957 after a reign crowned with the love of his people, made it a condition of his acceptance of the throne that a plebiscite be held to test Norway's desire for a monarchy. Though republican sentiments had been quite strong, a great majority chose that Norway remain a monarchy. King Haakon went on as he started, always sensitive to the wishes of his people, modest in his person, vigilant in defence of the letter and spirit of parliamentary democracy. Now he is succeeded by King Olav, long trained by his father in the exacting functions of a constitutional monarch.

The years that followed 1905 were dominated by a concentration on developing the nation's resources to create an improved standard of life for the people. There was relatively little concern with international affairs, and a policy of neutrality survived successfully the first world war, even if the economy was disturbed seriously and losses of ships and seamen were very heavy. But neutrality was early wrecked in the second world war when, on 9 April 1940, German forces invaded the country at several points.

The Norwegian armed forces were unready for this attack, but they fought back in a two-month long action, and capitulated not until after the fall of the Low Countries and France in June. It was a source of strength then and in the five years that followed that the government and King Haakon and his family had slipped the enemy grasp and clearly expressed their determination to resist and never submit. Parliament too was



At the head of the Oslo fjord lies Oslo, Norway's capital, its face to the south and surrounded by hills and woods preserved for ever as the city's playground.

Left: Parliament House lies in Oslo's principal thoroughfare, the bustling main street, Karl Johan.

able to meet in April 1940 and make the necessary declarations and resolutions to continue the fight. Thus even when king and government had to sail to Britain and carry on the struggle from there, it was on the basis of parliamentary authority and constitutional continuity. The big merchant fleet, particularly the tankers, played an important part in the battle of supplies, and army, navy and air force units were built up again on foreign ground. In Norway, the quisling movement proved small and weak, and very nearly the entire people were united in opposition to the new imposed rule. All sections of the community demonstrated non-cooperation and growing active resistance, which in turn provoked mounting excesses by the occupying power — imprisonment, torture, deportation, execution.

From the war the Norwegians emerged in a sense stronger, certainly more united, than before, and more aware than ever of the worth of freedom and the need to guard it by means other than a hopeful neutrality. Norway became one of the founder-members of the United Nations, just as it joined the League of Nations after the first world war, and hoped that this time an effective system of collective security would develop. But when the international situation worsened it also took the radical step, in 1949, of entering a military alliance, the North Atlantic Treaty Organisation, in order to find security together with like-minded nations of the west. At the same time Norway built up its own military strength, extending the term of compulsory training, equipping the air force with modern fighter planes, and establishing a home guard, 75,000 strong, which with its enthusiasm, rifle skill, local knowledge, is a factor that counts in the national defence. Norway has been aided in its military programme by large supplies of equipment from the United States especially, but the government has refused to allow the establishment of foreign bases on Norwegian soil as long as the country is not attacked or threatened by attack.

In the United Nations, Norway's role has been active, and it had the honour of providing the organisation's first secretary-general, Trygve Lie, who was foreign minister during the war. Although Norway sees NATO as its first line of defence, it is firm in the faith that the universal forum of the United Nations is the ultimate hope for world peace. It is the recognition that UN must have force as well as faith behind it that made Norway one of the first to contribute a contingent to the UN police force in the Middle East after the Anglo-French intervention in Egypt.

It is a committee of the Norwegian parliament that awards the Nobel peace prize, and the idea of peace as a good to work for is deeply instilled in the Norwegian people, and the concept of international responsibility is strongly developed. There has been a ready response to appeals on behalf of refugees and the victims of floods and other disasters abroad, and in the field of technical aid to under-developed countries Norway has been vigorous in support, both through the United Nations and through a fisheries and health project of its own in India. Norway is firm in acceptance of the need for international cooperation in all fields, economic and social as well as political and military. Closest, and most rooted in tradition, language, and other factors, is the cooperation among the Scandinavian countries. The abolition of travel, residence, and labour restrictions among these countries, the establishment of reciprocal social welfare benefits, a parliamentary consultative council, and a Scandinavian airlines system are just some of the tangible results of that cooperation across frontiers in the north.

The foreign and defence policy pursued by Norway since the war has been backed by all the five democratic parties in parliament, although naturally there have been differences of emphasis from time to time. Altogether there are six parties in parliament, their strength after the elections of October 1957 being: Labour 78 seats, Conservatives 29, Liberals 15, Agrarians 15, Christian Democrats 12, and Communists 1. A system of proportional representation with large multi-member constituencies ensures a fairly accurate relationship between votes and seats, and Norwegian electors

Norway, staunch in support of the United Nations, has contributed many soldiers to the U.N. Force in the Middle East.

A Norwegian technical aid project has been operating for several years in India. Fishermen there are being instructed in boat construction and modern fishing methods.

— all men and women over the age of 21 — have a wide and effective choice of representatives. Political conditions have long been very stable, and since the war the Labour Party has had a majority over all other parties in parliament and held office alone under the premiership, most of the time, of Einar Gerhardsen. The Labour Party, once strongly marxist, is no longer doctrinaire socialist, and it may be said that all parties except the communists have much in common, first and foremost adherence to parliamentary democracy and, second, a positive approach to many of the basic economic and social problems.

Liberty, equality, fraternity are more than catchpenny slogans in a country where freedom of the person, freedom of expression and organisation, are old-established; where titles of rank and nobility and extremes of wealth and poverty have been abolished; and where cooperation is accepted by all as the essential fabric of society. There has been a tendency for the power — and certainly the powers — of the executive to grow in accord with the concept of public responsibility for individual welfare, but the legislature is still undiminished the nation's forum, the maker of laws, the voter of moneys, and fundamental still is the ultimate quadennial judgement of the electors. Norwegians are schooled in democracy at many levels, and not least has local government been vigorous and strong on the basis of the municipal law enacted 120 years ago. Citizens' rights are enshrined very clearly in the constitution, and the courts of law are guardians of those rights, with the supreme court the universally respected and trusted tribunal, independent interpreter and enforcer of constitutional rights and duties.

The area of political agreement is large, and even in economic and social fields differences are relatively moderate and tempered as a rule by more than mere party considerations. Norway's is very much a mixed economy. Farmers and fishermen are nearly all small independent men, but cooperate in many ways, not least in marketing. Shipping and whaling are the domains of private capital, and the great majority of industrial and manufacturing concerns are also privately owned. But in mining and aluminium, state as well as private plants are operating, and the biggest steel plant is also state-owned. Norway's biggest chemical concern has the state as the principal but by no means the only shareholder. In hydro-electric power generation, industry, local authorities, and the state all build and operate plants. The railways are state-owned, and most of the cinemas are municipally owned. The import and sale of wines and spirits are in state hands.

No doctrine, but rather a pragmatic consideration of what is practical and desirable in particular cases, lies behind this mixed economy. In any case, ownership is not as important as control in determining economic policy. Over the economy as a whole the government exercises a considerable power, although the instruments used now are more indirect than direct, more fiscal than physical, compared with the austere first years after the war.

In recent years, economic problems have been different from those of depression and unemployment which Norway shared with other countries from time to time before the war. Employment has been full, purchasing power high, and the need has been for restraint, in order to control the pressure on prices and keep economic activity within the bounds of the nation's capacity. Wage restraint on the part of labour, credit restraint on the part of capital, have been important factors in maintaining stability.

On the whole, the concept of the nation as a community, a family, that must cooperate for the common good, is deeply instilled in Norwegians. Cooperation is strong, among producers and consumers, workers and employers. Here are strong organisations, devoted to sectional interest, but always within the ambit of a wider responsibility. There is parliamentary legislation to ensure that in the last resort not factional but national interest shall be asserted, and there is the apparatus of the courts to ensure

The proportion of old people is tending to grow as conditions of life improve. Social welfare provisions ensure that the twilight of their years shall be enjoyed in comfort.

In Norway are still many unpretentious but gracious wooden houses such as this that seem to have grown into and become part of the landscape.

that disputes of citizens and groups shall be determined according to law and contract. To take a concrete example, working days lost through strikes and lockouts have been kept down by the carefully worked out rules of procedure for the negotiation and observance of collective agreements between unions and employers' representatives, and by the provisions enacted for the operation of labour courts and mediation and arbitration machinery.

Social conditions have contributed towards good labour relations in Norway. Extremes of wealth are not great. On the one hand, heavy taxation pares down the large earnings. On the other hand, much of state and municipal revenue is redistributed in social services. A public health insurance scheme covers almost the entire population, dependants as well as workers, and is financed jointly by the state, municipalities, employers and employees. A similarly financed scheme insures nearly all wage-earners against unemployment. All over the age of 70 receive an old age pension if income is below a stipulated level. It is financed largely by a special levy assessed and paid in conjunction with income tax. The state schemes for health and unemployment insurance and old age pensions were established before the war, and since the war family allow-

The standard of hospitals is high and no expense is spared to make them both efficient and attractive.

ances have been introduced. There are still gaps in the social security system, but these are gradually being repaired with the object that all, regardless of their means to pay, shall be assured their basic material needs in bad times as good.

With improved conditions of employment and social welfare have gone a marked advance in the health and longevity of the people. The health service is not entirely free, but the standard of public hospitals is high, and there is a good distribution of doctors in private practice throughout the country. Better homes, better food, better living generally have reduced greatly the incidence of tuberculosis, and epidemic diseases of all kinds are rare. Cancer and heart failure are now the principal causes of death. Even though birth control keeps families small, the birth rate is twice as high as the death rate, and the population is slowly mounting. The number of old people over the retiring age of 70 is growing, and poses its own socio-economic problems, but the number of children is also increasing, and this too raises problems in terms of schools and teachers.

Fundamental in every society is the educational system. Norwegians look on theirs with some pride, although it is by no means as good as they would like it to be. The period of universal compulsory schooling is still only from seven to fourteen, but the classes are small and staff and premises good on the whole, although the position is necessarily less satisfactory in the rural districts with scattered population. There is agreement to extend the school-leaving age to fifteen or sixteen within the next few years, and in the meantime the majority of children proceed at fourteen from the primary school to continuation or trade school or to a secondary school. There are hardly any private primary or secondary schools. Practically all children, regardless

Norwegians are proud of their schools. The one pictured here shows the recent trend in favour of smaller units with the friendly look.

The Commercial High School in Oslo.

of income or occupation of the parents, attend the same municipally run primary school in the district where they live, and compete on equal basis according to record and talent for places in the secondary and other schools at the age of fourteen. Until that age there is no attempt at differentiation or specialisation, and even at the secondary school there is only one curriculum for the first two years, and not until the pupil is aged sixteen is the decision taken to carry on for another one year (realskole) or for another three (gymnasium) and some specialisation commenced. It is the artium examination at the conclusion of gymnasium after twelve years of schooling that gives entry to the university.

New students at the matriculation ceremony at Oslo University.

Above: Students have built their own «town» in Oslo where they can rent a room very cheaply. Above right: A flat for married couples at the students' «town».

Norway has two universities, one in Oslo established in 1811 and one in Bergen established as recently as 1948. In addition there are a number of colleges of university status in specialised fields. These include the institute of technology in Trondheim, where engineers and architects are trained, and the agricultural, veterinary, and dental colleges. The universities and university colleges have altogether some 6,000 students. Norway lacks facilities to train all who want to qualify for degrees, particularly in medicine, engineering, and other science subjects, and since the war thousands of students have attended universities abroad. However, at Trondheim and elsewhere, expansion is under way.

All primary, secondary, and university education is free. But living costs can often be a problem, particularly for provincial students. To help to overcome this a students' bank has been set up by parliament where loans can be obtained at low interest for repayment after the completion of the course. The students have their own strong and vigorous organisations, and in Oslo for instance they own and run their own «town» with almost 1,000 rooms where students can live very cheaply in term. In the summer vacation the «town» becomes a tourist hotel and the profits keep down the rent charged to students.

Not far from the truth is the legend that Norwegian children are born with skis on their feet.

Norway is very much a young people's country. Certainly if they are sportsmen and love the open air life, few countries can offer them more. Towns are small and even in Oslo the countryside is only minutes away. Walking, cycling, camping in this sparsely populated country with its wide open spaces can be enjoyed to the full. In summer the fjords and channels, the rivers and lakes, are there for boating, bathing, and fishing. In winter the snow and ice are there for skiing and skating. Participation in all these pursuits is widespread, for the whole of this richly diverse country is so easily and cheaply accessible even for the town-dweller. Leisure, not least to enjoy sport and the fresh air, is counted an integral part of the standard of living. By starting early and cutting out the lunch-break, many office-workers finish at four in winter, three in summer. Industrial workers have still a forty-eight hour week, but this will probably be reduced to forty-five by 1959. Important is the parliamentary act of 1947 providing three weeks holiday with pay for all wage-earners.

Football, athletics and sailing are the principal competitive sports in summer, and in winter skating and skiing, all on an exclusively amateur basis. In skating, Norwegians have often been world champions, and until recently ski jumping was a Norwegian hegemony. The annual jumping contest at Holmenkollen, Oslo, is the greatest sporting event of the year, attracting up to a hundred thousand spectators as well as the cream of ski jumpers from the world over.

Above: Sailing is one of the most popular of summer sports in Norway.

Right: Famed internationally is Holmenkollen, Oslo, where the ski jump contest every March attracts some 100,000 spectators.

Below: Rowing is another favourite summer pastime.

Left: Famed explorer Roald Amundsen was the first to reach to South Pole. Above: «Fram», the polar ship used by Amundsen and Nansen, is seen here trapped in the Antarctic pack-ice in 1895. Right: Today «Fram» is on show in this building at Bygdøy, Oslo.

Opposite: Fridtjof Nansen, Norwegian explorer, scientist, statesman. After the first World War he devoted his efforts to the repatriation of prisoners and the relief of refugees

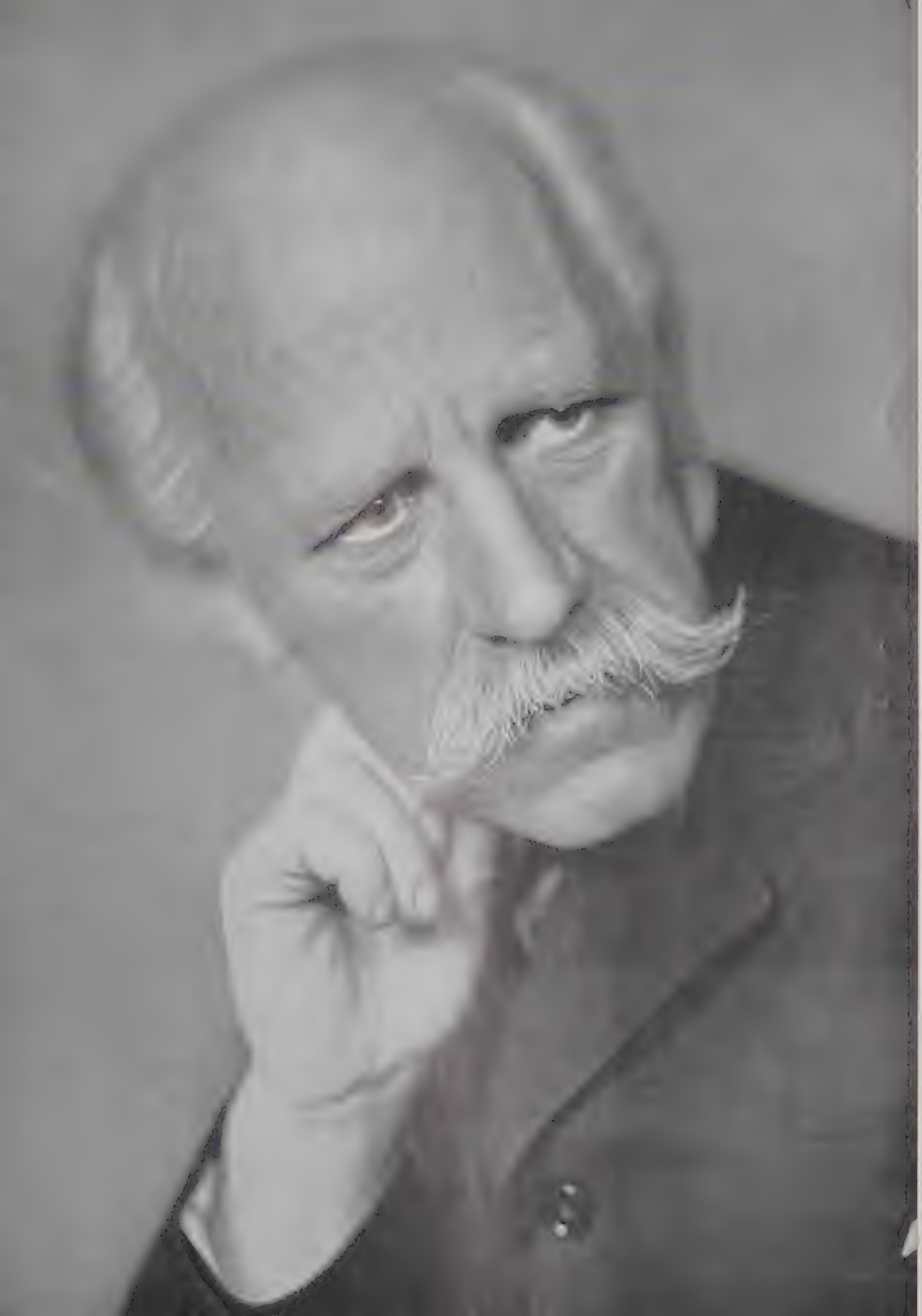
Below: Thor Heyerdahl's Kon Tiki raft drifting across the Pacific from Peru to Polynesia in 1947. Now it is housed at Bygdøy, Oslo, a monument to the spirit of adventure that still lives.

Norway is the home of skiing, and the little valley of Morgedal in Telemark is its cradle, where a hundred years ago skis were raised from the status of a means of transportation to instruments of sport and pleasure. From Morgedal ski jumping especially spread to Oslo (then Christiania), and later enthusiasts took skiing to many parts of the world from America to far Japan.

Norwegians are great travellers, keen to explore their own far-flung country, and spurred also to traverse the unknown spaces of the world beyond. In a number of famed expeditions, by skis across Greenland, by boat drifting farthest north among the pack-ice for years on end, Fridtjof Nansen achieved an international name, which he later made more illustrious still by his work on behalf of the hungry and the homeless as League of Nations High Commissioner for Refugees. From him stems the Nansen passport for the stateless.

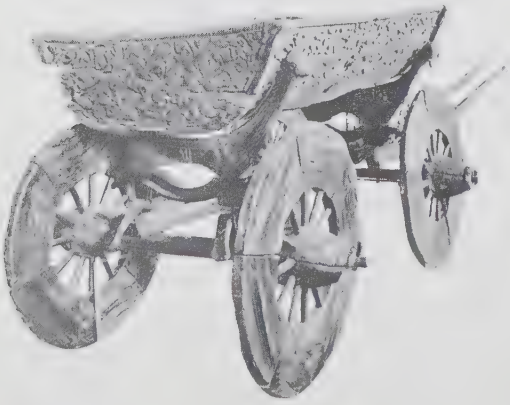
In the Antarctic, another Norwegian explorer, the redoubtable Roald Amundsen, was the first, in 1911, to reach the south pole. Later he was also to fly across the north pole. Eventually Amundsen was to disappear for ever in the Greenland Sea in a search for the Italian aviator General Nobile.

In 1947 another Norwegian, Thor Heyerdahl, drifted across the Pacific on a raft, ostensibly to demonstrate his theory that the Polynesian islands could have been populated from South America. His Kon Tiki raft can now be seen at Bygdøy, Oslo, near where the ancient Viking ships and Nansen's and Amundsen's ship «Fram» are exhibited. All are in the same proud line of descent, sea-craft sailed far by men who saw the ocean and the earth's extremities a challenge that they must meet.



Above: Norway's traditional folk dances are still a happy relaxation in a mechan- sed age. Here, children perform an old dance in a setting of ancient farm-houses at the Folk Museum at Bygdøy, Oslo.

This richly carved wagon from 800 A. D. s one of the treasures of Oslo's Viking Museum.



It is the spirit of adventure, the desire for discovery, that also has prompted Norwegian scientists in other no less spectacular spheres of exploration, in research into the physical nature of the universe. In oceanography, meteorology, geophysics, and astrophysics, particularly, Norway's contribution to knowledge has been important. Fundamental and applied research has been given expanded facilities in the last few years, and in technical and industrial research particularly there is now quite large expenditure. Most of the profits of the national football pool goes to research — the rest to sport. Appropriations for research must be small in a small country, but with modest funds Norway has been able to advance significantly even in the sphere of nuclear physics and energy. It was the first country outside the great powers to build an experimental atomic reactor, which it operates together with the Netherlands, and in 1958 its first power demonstration reactor starts operation. Now a major project is in hand financed by shipowners, for making a full-scale study and estimate of the technical and economic aspects of atomic propulsion for merchant ships. At Norway's Institute of Atomic Energy at Kjeller scientists from a number of countries have been able to work and study, in accord with the «open door» policy adopted from the start.

Norway looks into the future, but its feet are firmly planted in the past insofar as its people recognise that ancient traditions, the early strands of their culture, are worth preserving or at least remembering; for a living, expanding society cannot be built in a vacuum but only on the foundations of history and experience. It is the long

proving time that has gone before that has tempered and sharpened the ideas and ideals that are the tools for fashioning today and tomorrow.

On the face of it, in Oslo the capital especially, Norway seems very much a modern, sometimes even a brashly modern, country with few traces of, and even less hankering for, the past. But a closer look makes it clear that, in the countryside particularly, past monuments and traditions are extant and cherished. The museums of course are rich in relics, but also outside their walls the old culture survives, in buildings, in crafts, in costumes and dances, sagas and songs.

The score or so wooden stave churches that still stand and stem from the very beginning of the Christian era in Norway, seem to hark back to even an earlier, pagan inspiration, with their weird forms and adornments. It took a little time before European influence came full flood to Norway, and then was created in Trondheim, the ancient capital, a cathedral considered by many the finest Gothic structure in Scandinavia. Built in the twelfth century, it is in the twentieth century undergoing a major restoration which includes a remarkable new west front with a tapestry of stone figures on which sculptors and masons have now worked for several decades.

The mediaeval cathedral was a labour of love on which time, effort, money were expended seemingly without end. The modern object of devotion seems to be the town hall. Certainly the one in Oslo — designed by Arnstein Arneberg and Magnus Poulsson — has been lavishly built and embellished and makes an impressive frontispiece on the city's waterfront. Hospitals and schools and homes are built in a clean and simple style. Since the war there has been an immense amount of building. Some 250,000 new homes have been provided, and in the north whole towns have been rebuilt after war destruction. Some, such as the fishing port of Kristiansund, have arisen beautiful and bright from the ashes.

Kristiansund is one of several Norwegian towns completely rebuilt after being reduced to ashes in the 1940—5 war.

Oslo Town Hall was opened in 1950 on the occasion of the Norwegian capital's 900th anniversary.

The financing, building, management of blocks of flats are conducted usually by cooperative societies with the occupiers of the flats as members. They make a capital payment towards the cost of their flats, but the construction cost is met principally by a loan by the State Housing Bank. This bank, set up after the war, lends at a low rate of interest with repayment over a very long period. Not only cooperative housing organisations but also individuals can borrow from the Housing Bank on very reasonable terms, and the majority of houses as well as flats built since the war have been financed in this way. Homes are privately and cooperatively owned in Norway, and there is very little municipal housing.

Norwegians are keen on domestic comfort and labour-saving conveniences, and most home interiors are exemplary in this respect, with well-equipped kitchens, first-class plumbing, and efficient heating and insulation. A home is as good a place as any, perhaps the best, to judge the culture and taste of a people, and whilst the average Norwegian home will not show an unerring appreciation of good design, there is a fairly clear trend in favour of clean lines, bold colours, in furniture and furnishings. After all, the long winter makes it natural to try to make the home interior a light, bright place.

Working in wood is very much a Norwegian craft. Not only furniture but the beautifully designed and constructed Viking ships, the stout log farmhouses, the wooden domestic utensils often so graceful, the elaborate carvings, all show the respect and knowledge which Norwegians show for the properties and possibilities of wood. Furniture in the contemporary Scandinavian idiom is made today which certainly in quality and perhaps in design too owes something to inherited traditions. But here as in other

A considerable building programme has been accomplished in Oslo in the post-war years. Blocks of flats such as the ones illustrated here have been built very largely by cooperative housing societies with the tenants as members and with financial aid from the State Housing Bank. Below right: Houses as well as flats are being built.

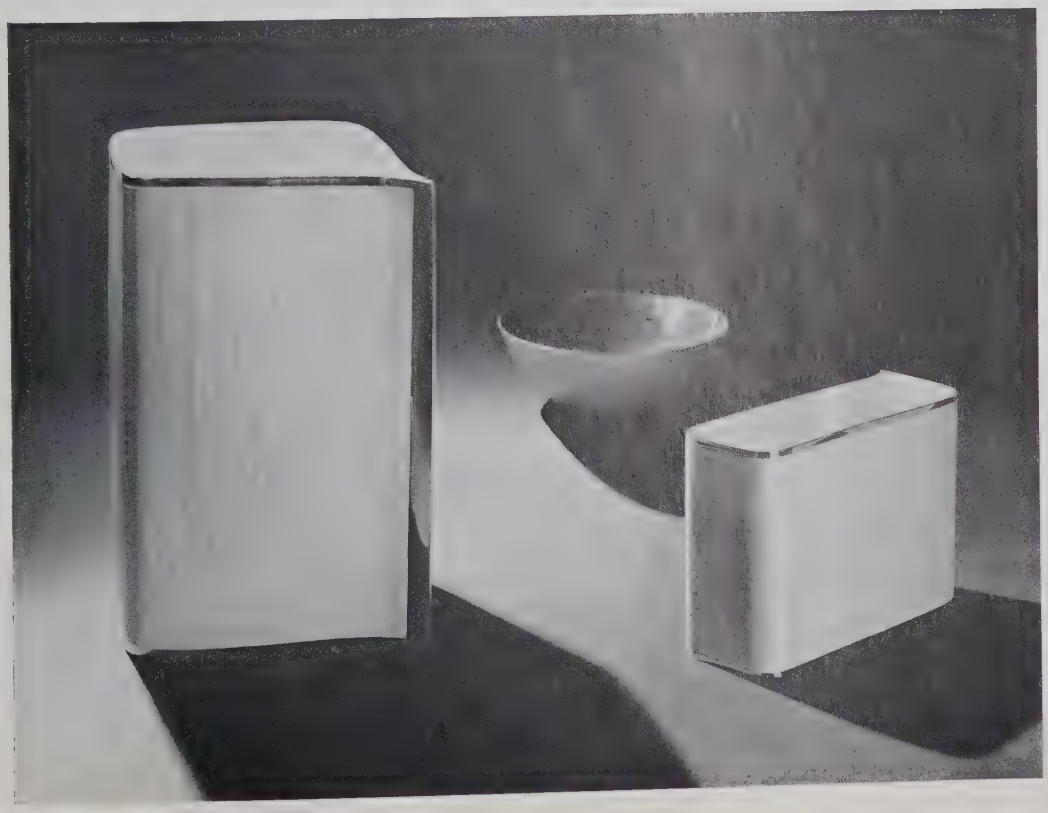
«The Kiss» — a noted example of the work of Norway's greatest modern painter, Edvard Munch.

fields of applied art Norway now has a considerable and growing number of trained designers and craftsmen with new and interesting ideas and techniques, and it would be wrong to harp too much on tradition, for the link between Norwegian contemporary and traditional design is often tenuous indeed.

Norwegian silversmiths have a record of fine work that can be said to go back to Viking days (lovely filigree work from that period is still extant), and they have in the last decades made a speciality of silver articles coated with transparent coloured enamel. In glass and ceramics much that is fresh and adventurous, simple and beautiful, has been created. In textiles there is a vigorous movement at present. Knitwear in traditional Norwegian patterns is still popular at home and abroad, and in furnishing fabrics designers have had much scope recently for presenting new and modern patterns. Pictorial weaving is very much alive today, and artists in this medium are often commissioned to do set pieces for public buildings.

Norway's peasants were fond of decorating their furniture and often whole walls and ceilings with painted patterns — the rose pattern is a cherished motif. In the accepted sense, however, the art of painting has relatively recent roots in Norway, going back only a century or so. Some of the most notable nineteenth century painters, such as J. C. Dahl (1788—1857), were trained and indeed sometimes themselves taught at German schools, and Dahl especially was a prominent figure and force in European landscape painting. Romantic art was succeeded by a growing realism inspired largely from France, and Christian Krohg (1852—1925) with his often socially motivated paintings is a particularly interesting representative of this trend. In turn, realism was followed by a new highly individual and imaginative school with which the name of Munch is indissolubly linked.

Above: In glass, Norwegian designers are creating many beautiful objects. Below left: Silver coated with transparent enamel is a Norwegian speciality which has won acclaim abroad. Below right: In the field of ceramics too Norway has a highly individual output.



Opposite: Oslo Town Hall is lavishly decorated with murals by leading artists such as Alf Rolfsen, Axel Revold, and Henrik Sørensen. The architects are Arnstein Arneberg and Magnus Poulsson.

Outstanding among Norway's sculptors is Gustav Vigeland. An entire park in Oslo is devoted to his work.

Edvard Munch (1863—1944) is the one recent Norwegian painter of major international stature, recognised as one of the founders and foremost exponents of the expressionist school. Technically his bold use of colour and the continuous sweeping flow of his brush are distinguishing features of much of his work. His choice of theme was often original, sombrely even morbidly dramatic at times, at other times tender and evocative. His large canvas of the sun, the source and force of life, dominates the main hall of the university in Oslo. He was loath to part with his canvases, and at his death he bequeathed several thousand paintings, drawings, etchings to the city of Oslo. Now a gallery is to be built, financed by the profits from the Oslo municipal cinemas, to house this collection by Norway's indisputably most important artist.

The city of Oslo, as indeed quite many other public authorities in Norway, is an important patron of the arts, and a number of the leading painters were commissioned to decorate the town hall with large murals depicting the land and people, their history and aspirations. Monumental mural paintings have become rather a Norwegian speciality, and one of the Oslo town hall team of artists, Per Krohg, was commissioned to paint the large mural which dominates the Security Council chamber of the United Nations in New York.

In a country where rich people are few and heavily taxed, the role of patron of the arts has very largely been assumed by civic bodies and business corporations. Norwegian schools and factory canteens are often decorated with engravings distributed through organisations set up for the purpose of spreading art among the people. Norwegians like to have original art on their walls, and the support they give the living artist undoubtedly helps him to go on living. For major sales and commissions, however, the established artist must look to the great public and business patrons, and these have often fulfilled their duty to the arts in a spectacular fashion.

Not least sculpture has benefited from this public patronage. One of the biggest shipping companies has commissioned figureheads by leading artists for fifty of its ships. And many towns are rich in sculpture that can be termed works of art and not just civic monuments. Outstanding of its kind in the world is the sculpture park in Oslo consisting of hundreds of figures and groups by Gustav Vigeland (1869—1943). It began as a proposal for a fountain to grace one of the city squares, but the project grew until the city of Oslo agreed to place a whole park at Vigeland's disposal, a palatial studio to work in, and a team of masons to translate his vision from clay to stone. Perhaps nowhere else in our utilitarian era has an artist been given such scope. It owes much to Vigeland's own forceful character, but even he could not have achieved so much without a city authority aware of its responsibility to art as well as to schools and sewers.

Early in his career Vigeland had done some fine studies of notable men and women in a Rodinesque style which everyone admires. His fountain is in the same sinewy manner, but the later sculpture which year after year was added to his park was stouter, starker — some would say Teutonic — in conception and execution, and there is by no means unanimity about its merit. Although there is a clear-cut variation in style, the park with its bridge, fountain, and monolith as the main features, is designed by Vigeland as a whole. The theme is man, his whole span, the passion and pathos of his human situation. There is no particular message, except whatever anyone cares to read for himself in these often superficially simple but usually finely and subtly wrought figures of man, woman, child, naked and bigger than life.

Music it is said is the most international of the arts, and certainly the compositions of Edvard Grieg (1843—1907) have become part of the repertoire of musicians everywhere. Much of his inspiration he took from the folk tunes of his country, melodies that had been preserved for centuries, a treasured heritage. Of the miniature Grieg was a master, and his songs still arouse a response today. His one piano concerto is as

The composer Edvard Grieg with Nina, his wife.

frequently performed as ever, and never fails to attract and inspire the concert-goers. His music for Ibsen's «Peer Gynt» also seems to have an enduring appeal. There is no other composer in Norway, past or present, who equals Grieg in reputation and stature. One of the most considerable now living, Harald Sæverud (1897—), composed new music for «Peer Gynt» a few years ago. Less melodious than Grieg's, it can claim to be more appropriate to the matter of Ibsen's fantasia. Also the works of Klaus Egge (1906—) and Fartein Valen (1887—1952) are arousing increasing international interest. Valen employs the twelve-tone technique, and even has a society in London devoted to his music.

Norway has had a few exceptionally talented executants of music, such as that almost legendary virtuoso of the violin, Ole Bull (1810—1880), and the recently retired operatic soprano Kirsten Flagstad. Norway has lacked specially built concert halls and a permanent opera, but progress is now being made to remedy both these omissions, and certainly the country seems to possess instrumentalists and singers of a calibre to warrant such amenities. Orchestral traditions are old. The symphony orchestra Harmonien in Bergen was established two hundred years ago, and Filharmoniske in Oslo is a century old. Both maintain a high standard, and the Bergen Festival of Music and Drama, held annually, is largely built around these two orchestras.

Conditions for drama have been far more favourable than for music. Oslo has eight theatres, including the old-established National Theatre — the «House of Ibsen». Bergen, Trondheim, and Stavanger also have permanent companies. The majority of these theatres enjoy state and municipal grants to cover what seem endemic deficits. A creation since the war is the national travelling theatre whose companies visit hundreds of towns and villages each year with plays and players of merit. In a country as sparsely populated and with such considerable distances as Norway it is not easy to spread cultural amenities evenly among the entire people. The national travelling theatre is one attempt to bring culture to rural districts and small towns, and other similar post-war creations are the national travelling cinema and the national travelling art gallery.

The Bergen Festival annually offers a rich and varied programme. Leopold Stokowski is conducting at the concert pictured here.

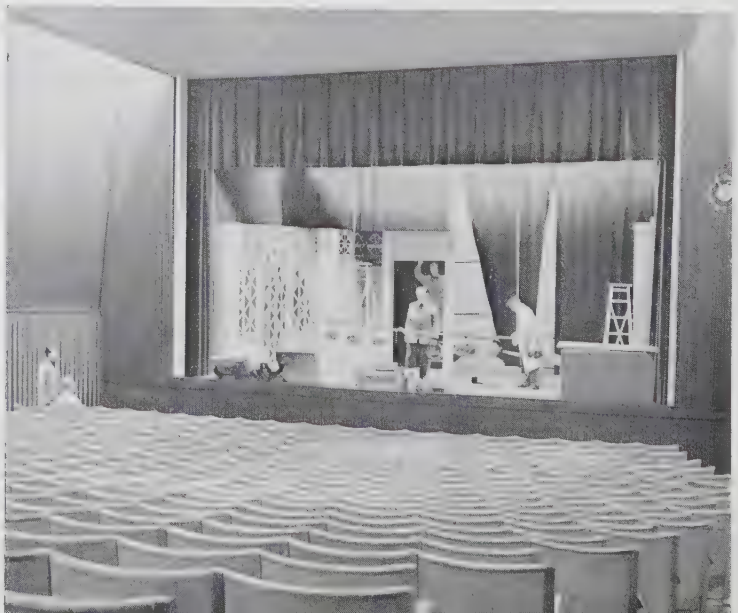
Below: A gala performance at Oslo's National Theatre — «The Theatre of Ibsen». Opposite: Folklore and folk music and dancing are features of the Bergen Festival which attracts many visitors from abroad.

The Norwegian State Travelling Theatre sends companies all over the country to bring drama to the people. By coach, by boat, across mountain and fjord, actors undertake long and difficult journeys. Often they must play in improvised and impractical premises, but their visits are encouraging more and more villages and towns to provide modern stage facilities.

The grant-aided theatres show considerable enterprise in the presentation of new and often advanced drama from London, Paris, and New York. Among Norwegian dramatists there is none of particular stature at present, and it is still Henrik Ibsen (1828—1906), that giant of the nineteenth century stage, that is the most-performed of Norway's playwrights. The dour air that surrounds so much that Ibsen wrote is supposed to reflect something that is characteristically Norwegian, but, like most attempts at national identification, this is not a particularly convincing proposition. Ibsen was a European, an international figure, and though some of his plays had a specifically Norwegian theme, and nearly all had a Norwegian domestic setting, the majority were independent of any real concern with the particular affairs of his country. Himself he lived abroad, in Germany and Italy, for nearly thirty years, and he handled broad human and social themes on a level above country or party, and probed problems of man and society with a relentless concern for root truths and a passion to uncover the foundations beneath the comfortable conventions.

His best-known verse-drama, „Peer Gynt", inspired in part by Norway's folk tales, is an attack on much that he considered worthless and weak in the Norwegian character, including a gross materialism. But in another, mightier, onslaught; in „Brand", also apparently directed at his own people, his target was an idealism so extreme that it outstripped man's earthbound capacity. Ibsen's well-known „The Wild Duck" demonstrates much the same theme in less spectacular circumstances. Like many a great artist, Henrik Ibsen may seem contradictory in much that he wrote, but, then, he did not tie himself to the enunciation of any particular programme, he was not „engaged", but simply sought by the power of his pungent, provocative playwright's pen to peel off some of the layers that swaddle the pith of the human condition and human society. In the plush of the late Victorian era he, like Shaw after him, was an important disruptive force. He was battered by the critics, but won through, and holds a place still valid today, perhaps particularly by strength of his technique. Today, in an iconoclastic age, his ideas raise less of a stir, but his dramatist's craft, his personification of the abstract in a deep perspective, is as effective as ever and fills theatres the world throughout. His combination of realism and a poetic symbolism is masterly: the stage may be a drawing room, but the thundering world is always there, waiting to break in. As a rule his women cut a more heroic figure than the men, and Nora, Hedvig, Hedda Gabler, and Rebecca West are favourite roles of actresses everywhere.

In Norwegian literature, Ibsen looms supreme today, but in the nineteenth century, in the vigorous atmosphere of international and political and social advance, there was a rich crop of writers of high stature. There was Henrik Wergeland (1808—1845), for instance, almost unknown abroad but still admired and read in Norway, a poet deeply involved in Norway's freedom struggle, a visionary, a master of imagery. Later in the



century, contemporary with Ibsen, there was Bjørnstjerne Bjørnson (1832—1910), that great-hearted patriot and poet, novelist and playwright, that patriarch and public orator of his nation, still loved, still read, today. Very Norwegian, yet he concerned himself with the struggle for freedom everywhere, and in Czechoslovakia he enjoys a unique affection and gratitude for the part he played in championing its national aspirations.

As elsewhere, Norway in the nineteenth and early twentieth century was rich in novelists of substantial stature, names like Alexander Kielland (1849—1906) and Jonas Lie (1833—1908) and, later, Sigrid Undset (1882—1949) and Knut Hamsun (1859—1952), both — like Bjørnson — winners of the Nobel prize for literature. Because he allowed his name to be used in support of the Nazis during the last war, Hamsun has been under rather a cloud, but no political aberration, however much rooted in personal temperament, can decisively detract from Hamsun's stature as storyteller and lyricist of nature and man's progress through the world. Hamsun, like the other novelists mentioned here, has been translated and enjoyed abroad, particularly in Central Europe (in literature as in art, Germany has been quick to set store on Norwegian works). Although Norway has quite many novelist, poets, and playwrights producing interesting work today, it is difficult for writers of a small country with its own language to secure translation and recognition abroad, and none now living writer has yet achieved any considerable international reputation.

Above: In the last years of his life, Henrik Ibsen the playwright lived in Oslo, and was regularly seen strolling in Karl Johan. There, outside the University, he checked his watch daily at noon. Left: A scene from Ibsen's masterpiece «Peer Gynt».

Arnulf Øverland, considered by many as Norway's most considerable living poet.

Even within Scandinavia, though the languages are similar and stem from the same root, a Norwegian book must be translated to achieve any substantial sale in Denmark or Sweden. It was easier during the centuries when Norway and Denmark were united, for then Danish was the literary language in both countries. But during those four hundred years up to 1814, inspiration slumbered. Only one notable literary figure did Norway produce then, Ludvig Holberg (1684—1754), born in Bergen, author of a great many plays of zest and wit that have earned him the name of ,,The Moliére of the North''. However, it was typical of the times that he spent all his adult years in Denmark, for the cultural atmosphere in Norway was too thin to support him.

Language is one of the most vexed and complex questions in Norway today. The old Norse literary language practically expired in the late Middle Ages. In the seventeenth and eighteenth centuries Danish was written by officials and educated people generally. In the assertive atmosphere of the nineteenth century, the old Norwegian as spoken in regional versions in various parts of the country was revived in a national, codified form through the efforts very largely of Ivar Aasen. Since then there have officially been two languages, or rather two versions of Norwegian, an originally Dano-Norwegian version called Riksmål (now more and more ,,Norwegianised'' in orthography and corresponding to the spoken language in the towns) and so-called New Norwegian which actually is rooted very deep indeed in the old dialects. Both have undergone revision during the past century and tended to grow closer, more similar, but between adherents of the two forms there is considerable animosity. Several important writers have employed New Norwegian, which has a simplicity and rugged beauty, and which moreover is strongly rooted in Norway's rural and oldest cultural traditions. On the other hand, Ibsen, Bjørnson, Kielland, Lie, Undset, Hamsun, and others of the country's leading writers wrote in Riksmål, although increasingly modified by the adoption of native words and expressions, and the general use of New Norwegian would make the language of these classics outmoded and less accessible for future generations. The trend hitherto has been towards an amalgamation between the two versions, to achieve one common language, but, naturally enough, neither camp is particularly enamoured of such a compromise solution. In the meantime, both enjoy equal status in the state administration, while local authorities, and sometimes referendums, decide which shall be taught in the schools as the main language. The division is fairly sharp between town and country. Newspapers, which are town-produced, are practically all published in Riksmål.

The concert hall at Broadcasting House in Oslo.

Newspapers are numerous and diverse. In Oslo, each of the six political parties has its own organ, and there are four non-party papers too, so that this capital of under half a million population has altogether ten daily papers. Their readership is more local than national, for all other towns of any size have daily papers of their own, concerned with national and international as well as local news, and usually there are at least two papers in a town, with competing political colours. Obviously with such a proliferation, average circulation must be low, and for most papers the budget is tight. Although papers of the same political complexion cooperate, each is an independent entity, individually edited, and chains of papers under the same ownership are unknown. Jointly the press finance the non-party news agency, Norwegian Telegram Bureau, which maintains a very good service of local correspondents throughout the country. Of some 1,500 regular publications in Norway, some 200 are newspapers and the rest magazines of many kinds. Among these are a few very popular weekly magazines with remarkably large sales, but most are specialised journals with small circulations.

Whilst the press is marked by its diversity, broadcasting has long been a state monopoly. Broadcasting, like so many modern amenities, is costly to spread over the length and breadth of Norway, with its sparse population, its distances and difficult terrain, but concentration in one national system has helped to secure a fair and effective

distribution of transmitters over the country as a whole. There is only one national programme, but the local transmitters broadcast short items of local interest. Short-wave broadcasts to Norwegians, particularly seamen, abroad, and in English to foreign listeners, are also operated. Broadcasting in Norway is financed by the licence fees paid by some one million listeners. No advertising is permitted. With the factors of population and topography obtaining in Norway, the introduction of television presents rather special problems, but a quite ambitious plan has now been approved by parliament, and the first regular television programmes are scheduled to start in 1960. Film production is small, and the best of the few feature films made annually are often semi-documentary in character. The six hundred, mostly municipal, cinemas show as a rule foreign films.

In the whole cultural climate, the institutions and ideas, that make a society, the role of the church cannot be ignored. According to the official statistics, ninety-six per cent of Norwegians are members of the Evangelical Lutheran church (established four hundred years ago after five centuries of Roman Catholicism). Few Norwegians are regular church-goers, but birth, marriage, death are milestones solemnised by most people in church, and the great majority of young people are confirmed. In the countryside and the small towns especially, there is a strong religious interest, and everywhere local branches of the various ,,home mission'' societies are found and flourish. Free church movements are numerous. The sabbath is observed strictly as a day of rest, and even at the height of the fabulously hectic herring fisheries, the fleet is land-bound on Sunday. Nor are there any Sunday papers in Norway, which suggests that perhaps social as much as religious motives lie behind this renunciation of labour one day a week. It is possibly another aspect of religious influence that the temperance movement is strong and that prohibition of alcohol still keeps parts of the country ,,dry''. Certainly, religious and ecclesiastical questions seem to interest many people, as witness the debate recently about hell's eternal torment and its validity in Christian teaching.

As an established church, Lutheran bishops and pastors are appointed by the Crown and are state-salaried and pensioned. They are supported by diocesan and parochial councils with advisory status. The church is backed by considerable activity by voluntary Christian lay organisations doing useful work in the social field. There are several strong missionary societies with some seven hundred missionaries in the field, in Africa, China, India, although their sphere of operation is tending to become increasingly circumscribed. The Norwegian Seamen's Mission with churches and reading-rooms in many foreign ports is a valuable institution, and the State Welfare Office for Seamen also does important work.

The political, social, even cultural institutions and achievements of a nation must reflect in a degree the economic foundations on which they are built, and these foundations in turn are determined very largely by natural conditions. What a nation is, what it makes, does, is then a matter of geography. Not entirely, of course. Man can overcome environment, change it, for better or worse. But the nation as it is today is — even now as the nuclear era dawns — shaped in the long mould of geography.

Geography determined that Norway's people should be few because most of it is mountain and yields no sustenance, determined that many of the few should be fishermen and seafarers, that some should be farmers, foresters, other hydro-electric engineers, factory workers, miners.

The sea, the fjords and islands, make Norway a watery kingdom indeed, where the boat is as common as the bus. And the Gulf Stream which the sea brings to the long shore brings a welcome warmth, so barley and berries ripen north of the Arctic Circle, so coastal waters grow rich with vegetation and micro-organisms and fish come in shoals to feed and spawn. And the Atlantic winds bring clouds heavy with moisture to Norway, and they break, burst, on the high mountains, and the rain and the melting

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Waterfalls are attractions for tourists, but also provide hydro-electric power for homes and industry.

Hydro-electric plants have been built all over Norway and are the source of cheap and plentiful power.

snow gather in great lakes till they tumble by waterfall and river back to the sea. This natural cycle is now harnessed for power, and the factories that stand in deep valleys and at the head of fjords are symbols of this industrial flowering.

The sea then, and the temperate climate, the mountains, barren of vegetation but rich in waterpower, are geographical features that help to make up the economic face of Norway today. There are others, not decisive perhaps, but important: the minerals underground, the sweet pockets of soil, the tracts of forest.

In Norway, nature has not been obviously lavish with its gifts. They have to be wrested the hard way. Yet, the compact between man and nature, here on the rocky north-west ledge of Europe, this corner nearest the white polar waste, has worked well on the whole.

Though Norway is historically ancient, it is forward-looking, and tomorrow, if sensibly managed, bids to be brighter than yesterday.

Fishing, farming, forestry, seafaring — all the traditional pursuits — are as vigorous as ever, indeed more so, because they are spurred now by an expanding economy and rapid technological change. At the same time, new spheres of industrial production have spun into the Norwegian orbit following the exploitation of hydro-electric power in this century.

The output of the fisheries has been pushed up constantly so that it is now almost two million tons a year. Bigger boats, better gear, improved organisation, increased processing are behind this growth — plus of course that demand has been sustained by a world market. Fish is one of the major exports. No country in Europe exports more fish than Norway. Here quantity is matched by quality, for Norway's fisheries are overwhelmingly coastal and the fish as fresh as the foam it springs from. The fish — it is mostly cod and herring — is shipped abroad iced, frozen, salted, dried, filleted, canned. In all cases it is in prime condition when landed and handled. That is the stamp, the seal, that labels the harvest of Norway's coastal fisheries as first-class.

Now that of herring alone more than a million tons are caught annually, a great deal goes to factories along the coast for converting to oil, meal. The oil is refined for edible use, the meal makes protein-rich fodder. Both are exported. From the liver of the cod, medicinal cod liver oil is produced which long has been an important Norwegian export. Not much of the fish is wasted nowadays. Even the shimmering scales of the herring have value now, they contain guanine which is made into paste for artificial pearls.

The fisheries which for thousands of years have been Norway's larder are still as valuable, vital, today. Science here goes hand-in-hand with the traditional, almost instinctive, skill and courage of the fishing population who grapple with sea and elements to bring home a laden boat. Research ships chart the shoals, laboratories and pilot plants probe new methods, new uses, to enhance still more the worth of the wealth of the sea's silver.

Ten thousands miles away in the Antarctic vast, Norwegians pursue bigger game, the whale, mightiest of mammals. Modern whaling as conducted in the Antarctic, with factory ships, was pioneered by Norway, and Norway still sends the biggest number of expeditions — nine — to the Antarctic every winter. This armada of factory ships and nearly a hundred catcher boats brings back some 150,000 tons of whale oil. Much is refined in Norway for edible and technical purposes. In the refining and hardening of marine oils into palatable fats, Norway has played a leading role. Norway exports whale oil raw, refined, hardened, and it also exports it as margarine in considerable quantity.

Whaling is important in Norway's economy. It was a Norwegian, Svend Foyn, who invented the harpoon gun which has cut short the life of whales without number, but Norwegians have also taken the initiative, before and after the war, in securing inter-

national agreement to protect whale stocks at an economic level. Indiscriminate, uncontrolled catching has made the whale almost extinct in waters where it once flourished, and Norway has done much to try to ensure that this shall not happen in the Antarctic, last of the great hunting grounds.

In Arctic waters the Norwegians hunt the seal for their blubber, their pelt; also the polar bear.

Bright is the fame of Norway's seafarers, descendants, if but remotely, of the feared Vikings. The dragon-prowed longship of the old Norsemen, that took them to England, France, Iceland, Greenland, even to the far North American shore, is now the sleek freighter, but surely it is some of that same adventurous spirit that prompts Norwegians today to operate a fleet of merchantmen that for long has been among the three or four biggest in the world.

Some of Norway's tens of thou[illegible] fishing boats are assembled in [illegible] coast port.

Norway has pioneered Antarctic whaling. In the summer the factory ships and catcher boats lie quietly at anchor in home waters. Below: A young recruit trains for a life afloat.

This fleet is far in excess of what Norway needs for its own carrying trade, and four of every five Norwegian ships sail overseas between foreign ports carrying cargoes for merchants the world over. This is a service of consequence for world commerce. Norwegian ships are fast, efficient, competitive. There are tramps to carry general cargoes, wherever they are wanted, there are cargo liners operating regular routes, there are tankers that carry a good share of the world's oil.

Norway's fleet now approaching nine million gross tons is making a bigger contribution to the country's currency earnings than any other export. Though Norway's exports are large, imports are even larger, and it is the earnings of the fleet that bridge the gap between the two.

Norwegian shipping enjoys no subsidies, no special advantages. On the contrary, it is one of the most heavily taxed in the world, whilst pay and social conditions onbord are among the best. It is in terms of quality of service and competitive freight rates that Norwegian shipowners have built up their leading role in maritime transportation. It is a position they have achieved by an almost supersensory appreciation of marine opportunities and requirements, both commercial and technical, which have developed so rapidly during the last century. Today sees Norwegian shipowners actively engaged in investigations and plans for atomic propulsion.

Though Norwegians spread themselves over the world to make a living, many stay at home to plough a furrow in their native soil. Though only three of every hundred Norwegian acres represent cultivated land and home pasture, farming is important. The production of grain and vegetables, meat and wool, milk, butter, and cheese, is considerable. Dairying is especially valuable. Norway must import most of its grain, much of its fruit, but is almost self-sufficient for meat and dairy products.

The visitor used to large tracts of rich farm land is surprised at the small plots which Norwegians have to cultivate. But many have forest land attached which helps to supplement income, or divide their time between farming and fishing or some other pursuit. The breeding of fur animals, especially mink, has become important, and hundreds of thousands of pelts are now exported yearly.

Agriculture has lost labour to industry in recent years, but mechanisation plus better methods, more fertilisers, improved stock, have pushed up output despite less manpower. Cooperation among farmers for acquisition of machinery and for marketing has been developed. Like the fishermen owning their own boats, the farmers are independent men owning their own land, but, again like the fishermen, they have learnt to cooperate for many purposes, and this has given them strength.

The Norwegian training ship «Christ
Radich» in New York. Many of Norv
sailors still train onboard sailing s

Life is not easy for farmers with thin soil, stone-infested fields, long winters and short summers, but even for them nature is fruitful most of the time.

Forests are important in the agricultural economy of Norway. They cover almost a quarter of the surface, and mostly they are owned by small farmers. Most significant commercially are the coniferous spruce and pine, raw material for the great pulp and paper industry. Timber is a raw material that has constantly enhanced in value hand-in-hand with growing industrial processing. Now very little indeed of Norway's forest wealth is exported as logs or sawn and planed timber. It nearly all goes as pulp and paper — more than a million tons a year, ranking among the biggest of Norway's exports.

Nor is this the end of the road for timber. Chemical pulp is being converted in Norway to rayon and staple fibre and yarn, and, most recently, a new chemical industry has been established on the basis of the millions of gallons of sulphite — a by-product of pulp — which formerly were poured as waste into the sea.

The processing of the forest's timber is an industrial romance, a science-fiction story come true. Wood, the oldest, easiest, most versatile of man's raw materials, has satisfied all his needs — fuel for warmth, logs for boats and shelter, paper to write and print on, now fibre for clothes, today and tomorrow increasingly chemicals for plastics and other purposes.

The forests show how the simplest, most basic resources, can possess potentialities formerly undreamt of. As they grow more valuable, Norway's forests are being increasingly scientifically managed, and great new tracts are being planted, with spruce, particularly in the western fjord region.

At present the forests have an annual natural increment of some twelve million cubic metres. When the new forests planted or planned — the rate of planting is approaching a hundred million trees a year — have matured, the annual increment will almost double. Here is wealth for the next generation, an investment in a richer tomorrow.

An investment in tomorrow is also Norway's great hydro-electric power programme. Just as new forests are being planted at a rate never before surpassed, so too the waterpower stored in the giant mountain catchments is being harnessed at a record-breaking pace. This is investment on the grand, spectacular scale, a matter of canalising the forces of nature for man's purpose. Lakes are enlarged, made to coalesce, tributaries are diverted, barren land flooded, dams built, whole inland seas created and constricted to serve man's design. Through mountains, tunnels are blasted to carry the rushing water miles through rocky dark to power chambers carved out of that same granite.

Norwegian merchant
modern. Figureheads
tors are a tradition
some shipowners ha

Factories are often located in remote areas close to the source of hydro-electric power.

Thousands of logs are being floated here to mills for conversion to pulp and paper. These rank among Norway's principal exports.

The turbines, generators are set deep inside mountains now in all major power projects. Cost is heavy, but security is great.

Norway has no oil, no coal except in remote Spitsbergen, and until waterpower started to be harnessed for electricity at the beginning of this century the industrial outlook was dim. Hydro-electricity opened new vistas of industrial growth. Industry in Norway marches hand-in-hand with waterpower development, and in the last decade this development has been pressed forward as never before. Hydro-electric generating capacity is being increased at the rate of hundreds of thousands of kilowatts a year, and stood at five million kilowatts altogether as 1958 opened as against only half as much ten years earlier. And even though Norway produced some 25,000 million kilowatt-hours in 1957 and consumes more electricity per head than any other nation, still no more than a quarter of total resources have so far been exploited.

Socially, domestically, as well as industrially, hydro-electricity means much for Norway. This most convenient source of light, heat, and power is supplied now to almost every home in the country, to ninety-seven per cent of the population, and only the remotest, most isolated homesteads now lag behind in the paraffin age. Most of even these few remaining ,,dark" districts will be supplied under the present electrification programme. A national levy helps to finance this scheme which spreads the boon of electricity everywhere in a land where distances are great, population sparse and scattered.

Hydro-electric power development is costly, laborious, but once a plant is built it will stand for generations, producing energy at minimum expenditure of manpower and — barring cataclysmatic climatic change — never running dry.

This investment in hydro-electricity is already changing the economic face of Norway. Industry is now the biggest employer and makes the biggest contribution to national income. Cheap and plentiful hydro-electric power is the key to the spectacular industrial growth in this century. Without that power, major arms of Norwegian industry, whose products compete successfully on the world market, could not exist.

The electro-chemical and electro-metallurgical industries were established specifically to make use of Norway's cheap, plentiful hydro-electric power. Both consume power in immense quantities. By the application of that power, a nitrogen industry has been built up among the world's biggest, exporting chemical fertilisers by hundreds of thousands of tons annually to many countries. Output of nitrogenous products, nitrate of lime in particular, is more than a million tons a year, and the raw materials are the nitrogen and hydrogen drawn from air and water, extracted and married by the intermediary of electricity. Calcium carbide, cyanamide are other important products of Norway's electro-chemical industry which now has an output range of scores of different items which together rank big among the nation's exports.

Likewise the electro-metallurgical industry has been built up on cheap and plentiful power. The aluminium plants now producing at the rate of 100,000 tons a year import their raw material, bauxite or, mostly, alumina, from thousands of miles away, process it in Norway, and ship and sell this light and valuable metal to countries the world over at competitive prices. Aluminium takes twenty thousand units (kilowatt-hours) of electricity a ton to produce, and only for a nation like Norway with exceptionally cheap power is this an economic proposition. Expansion plans now in hand will almost double Norway's aluminium output in the next few years.

In ferro-alloys—chiefly ferro-manganese, ferro-silicon and ferro-chrome — Norway has a big production and export on the basis of cheap and plentiful power.

Norway has a considerable mining industry, and iron ore and pyrites particularly are being exported in quantity. Now with the aid of hydro-electricity, Norway is processing more of its mineral resources itself. Notable is the big plant built recently near the Arctic Circle for electric smelting and converting and rolling of Norwegian iron ore into high-grade steel products. Much of output is going overseas.

At Mo i Rana near the Arctic Circle Norway's first large steel plant has been built since the war. Below: Attractive homes have been built for the workers at this new industrial centre.

It is significant of present trends that ores and minerals rank first since 1956 among Norway's exports, ousting pulp and paper from this placing for the first time.

Norway is large, population small, so that factories and industrial centres are still only pinpoints on the map, and the beauty of the land is untouched, undiminished, nearly everywhere. And even a factory set amidst mountains, by some remote fjord, is not ugly seen in the context of the economic and social possibilities which it yields in small rural communities formerly constricted, sometimes broken, by lack of opportunities.

With industry has come mechanical and manufacturing skill. For power plants Norway makes turbines, generators, transformers, and abroad Norwegian engineers and contractors have built hydro-electric stations from Australia to Brazil. In the design and construction of electric smelting plants Norway has gained a special experience and skill, and here too there is export. For instance, the big steel plant now being built in Venezuela has electric smelting furnaces — the biggest ever made — from Norway.

In other spheres of production and processing where Norway has special experience there is plant and equipment of Norwegian design and manufacture to meet home and foreign demand. Canning plant, herring oil and meal plant, wood-working and pulp-milling plant, power saws for forestry are among the items exported.

Although Norway has most of the ships for its merchant fleet built abroad, Norway's own yards have orders for more than a million tons and ships exceeding thirty thousand tons deadweight are now under construction and vessels of over sixty thousand tons are booked for building in home yards now being extended. Norway also has a great many boatyards for building fishing vessels, sailing yachts, motorboats, and other craft. Many small boats are exported, and there is also production and export of marine items such as engines, deck machinery, echo sounders and marine radio equipment.

Also in manufacturing spheres where Norway can claim no special experience or advantage, there is production and export in such advanced and competitive fields as tape recorders and portable radios, adding machines and cash registers. These are recent developments and reflect the fact that the rising industrialism in Norway is establishing a whole climate of technical competence and skill which can find expression in a number of different forms of manufacture.

Art and craft products from Norway are popular on the world market.

Furniture, silver and enamel products, glass and ceramics are among the many c and craft items from Norway which have won favour abroad. Materials and wor manship are of the best, but perhaps the most important factor is that the design is the Scandinavian style now so admired internationally. Also traditionally styled swea ers and other knitwear in strong Norwegian wool are now a considerable export. Sk and other winter sports equipment are naturally exported by Norway – the hom of skiing.

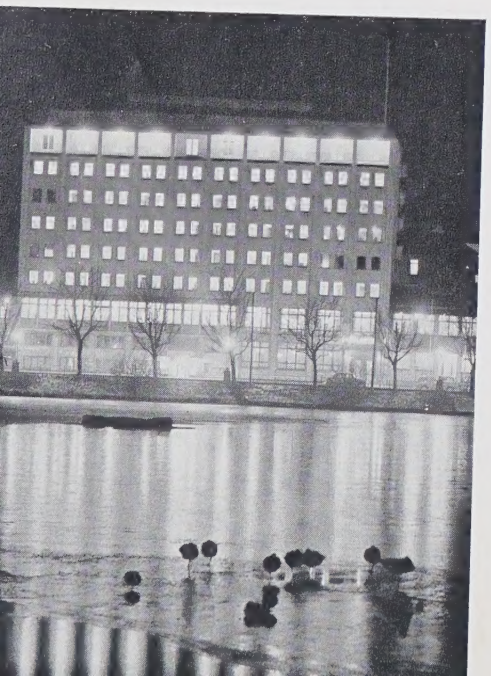
The tourist traffic brings a million visitors yearly to Norway for summer holida and winter sports. Excellent hotels have been built to cater for this traffic, and many youth hostels and camping sites too are provided. Communications to Norway by sea and air, rail and road, are excellent, and within the country a very good transport network has been developed in spite of the tremendous natural obstacles. Railways link Oslo and Bergen across the mountains and Oslo and Stavanger via the south coast. From Oslo another line goes north to Trondheim and beyond as far as the Arctic Circle. The roads, like the railways, are often masterpieces of engineering, and hundreds of tunnels, bridges, and ferries are links in the nationwide network. Along the coast, and particularly from Bergen and north as far as Kirkenes near the Russian border, passenger ships operate regularly and offer an attractive way of seeing much of the country. Internal air communications are good and fares reasonable.

Norway has a wealth of attractions for the visitor — fishing, sailing, climbing, bathing, skiing. The scenery is renowned the world over — seemingly endless mountains, a maze of islands and sheltered coast channels, majestic fjords piercing deep into the land. Here too is the midnight sun turning the northern night bright in summer.

Tourism looms big as a money-earner, but it ranks even bigger as an instrument international friendship. It is for the grandeur of the scenery that most tourists vis Norway, but they get a glimpse too of the people, their way of life and labour, perhaps even of their ideals and aspirations.

Norwegians themselves are great travellers. As a small nation, they are internationally orientated, recognising that none can live in isolation from his neighbours. With a limited range of natural resources, Norway must import heavily and render an annual return in goods and services. It is very largely through its high level of foreign trade — by application as far as possible of the classic principle of the international division of labour — that Norway has achieved its present standard of living.

Modern hotels are found all over Norway. Atlantic Hotel in Stavanger is a fine example of the high standard of accommodation offered to travellers.



An economy so closely geared as Norway's to international trade is especially susceptible to the vagaries, the ups and downs, of the world market. But though Norway cannot work and prosper in isolation, it can do, and has done, much within the ambit of its self-determination to secure an effective, a viable and expansive economy. Private and public enterprise have gone hand-in-hand in developing the natural resources to the limit of available capital and labour. The rate of investment since the war has been among the highest in the world, and there has been full employment. Production and productivity have been increased, and though prices have risen, wages have gone u even more, and the overall standard of living is higher than ever before. Taxes are hig but are returned in part by extensive social services and subsidies. There has been a levelling out of real income to secure as near as possible an optimum utility rating for consumption.

These then are some of the economic facts of life in Norway. Behind it all is the recognition that even with its bleak if beautiful highlands, its stubborn granite, its paucity of soil, its northern situation, its lack of obvious assets such as oil, coal, its rather impractical configuration of mountains, fjords, and islands, its tiny population, this Europe's Arctic outpost still has its riches, resources that with dint of effort can be made to yield a good enough economic basis for living.

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